



KP Carrier

| KP16 | KP20 | KP32 | KP40 | KP454 | KP50 | KM50 |

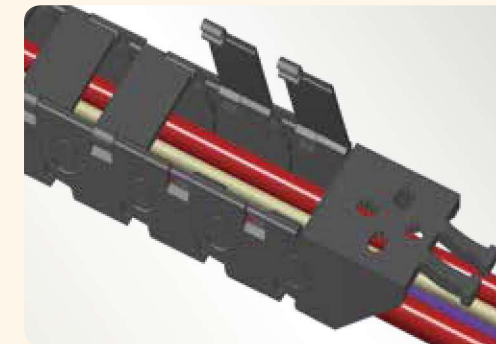


KP Carrier

엔지니어링 플라스틱을 사용해 가볍고 내구성이 우수하며 바디 일체형과 분리형으로 나뉘어 조립 및 해체가 용이해 보수가 편리하다.

Using engineering plastic, it is light and durable, divided into all-in-one and detachable body, and easy to assemble and disassemble, making it easy to repair.

- **주요 사용장비** : 겐트리로봇 주변장비, 검사장비 등
- **Applications** : Gantry robot equipment, Inspection equipment etc.



Standard Type

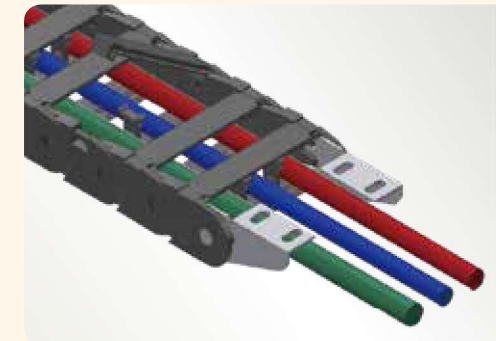
KP Carrier
(Small)

- KP16
- KP20
- KP32

Page : A 07

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Page : A 11



Standard Type

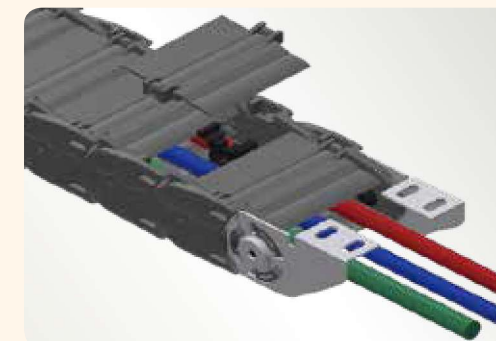
KP Carrier
(Middle)

- KP40
- KP454
- KP50

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Enclosed Type

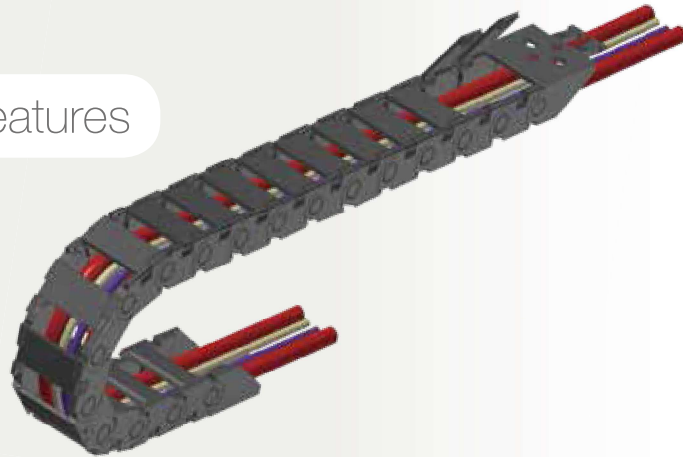
KP Carrier
(Middle)

- KM50

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KP Carrier Small Features

KP Carrier Small 특징



■ 우수한 내구성

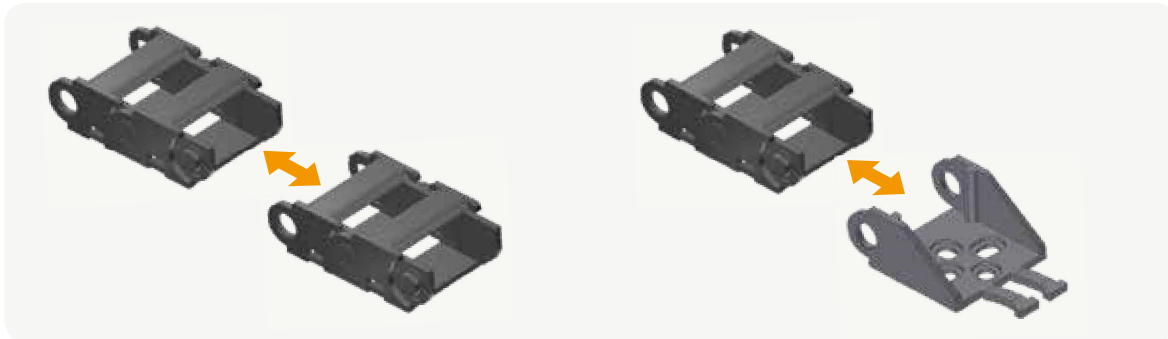
KP Carrier Small Type은 충격강도가 우수한 엔지니어링 플라스틱을 사용하여 가볍고 내구성이 뛰어납니다.

Light and durable, using engineering plastics with excellent impact strength.



■ Easy to Assembly of the Bodylink ■ 쉬운 바디링크 체결

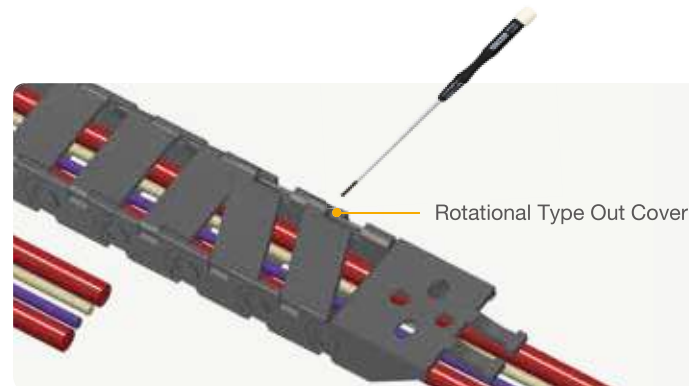
KP Carrier Small Type은 바디의 좌우가 일체형이며 피치가 작은 Small형으로 바디링크의 조립 및 해체가 용이하다. The body is all-in-one part. It is shot-pitch small type and easy to assembly and disassembly of the body link.



■ Ease of Repair ■ 보수의 용이성

KP Carrier Small Type은 외측 커버가 오픈힌지 Type으로 "—" 드라이버로 해체를 할 수 있어 전선 및 호스의 포설과 보수가 용이하다.

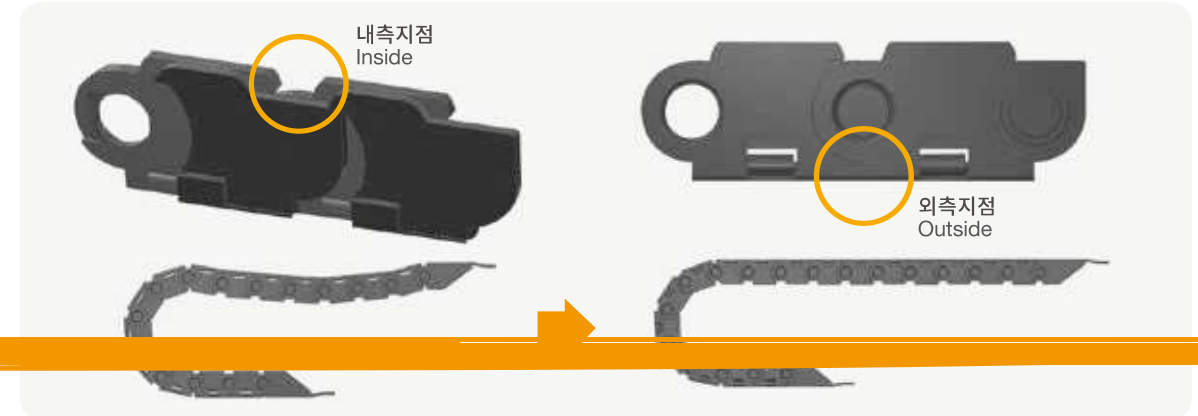
The KP Carrier Small Type is open hinge types that can be disassemble with a flat-head screwdriver, making it easy to install and repair cables and hoses.



■ Reduce Sagging Due to Self-Load and Load ■ 자중 및 하중에 의한 처짐 완화

KP Carrier Small Type은 처짐을 보완한 바디링크 구조로 동일 피치대비 FreeSpan이 20%이상 향상되었으며, 바디 중간지점이 아닌 바디 내·외측 지점에서 링크를 지지하는 구조로 되어있어 지지력이 향상되었다.

KP Carrier Small Type is body link structures that reduce sagging, and FreeSpan is improved by more than 20% compared to the same pitch and supports the link at the body inside and outside maximum points rather than the body middle point, thus improving the support force.

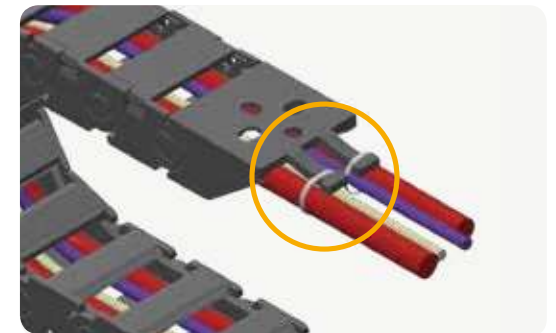


■ Prevent Cable and Hose Movements ■

케이블 및 호스 유동방지

KP Carrier Small Type은 무빙, 고정브라켓이 Tie를 묶을 수 있는 구조로 되어있어 캐리어의 움직임에 의한 케이블 및 호스의 유동을 방지할 수 있다.

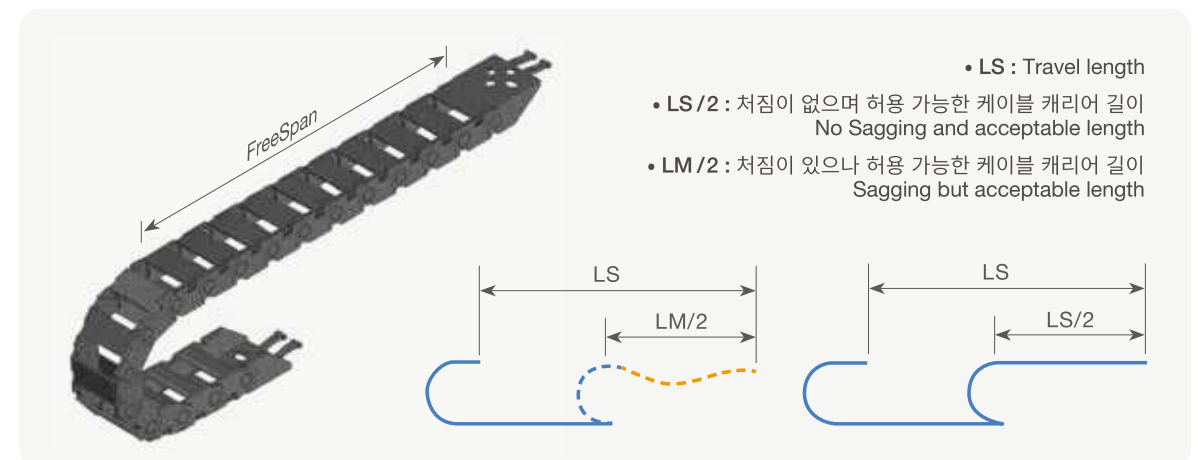
The moving and Fixed-bracket is designed to tie up with a cable tie, which prevents the twist of cables and hoses by the movements of the carrier.



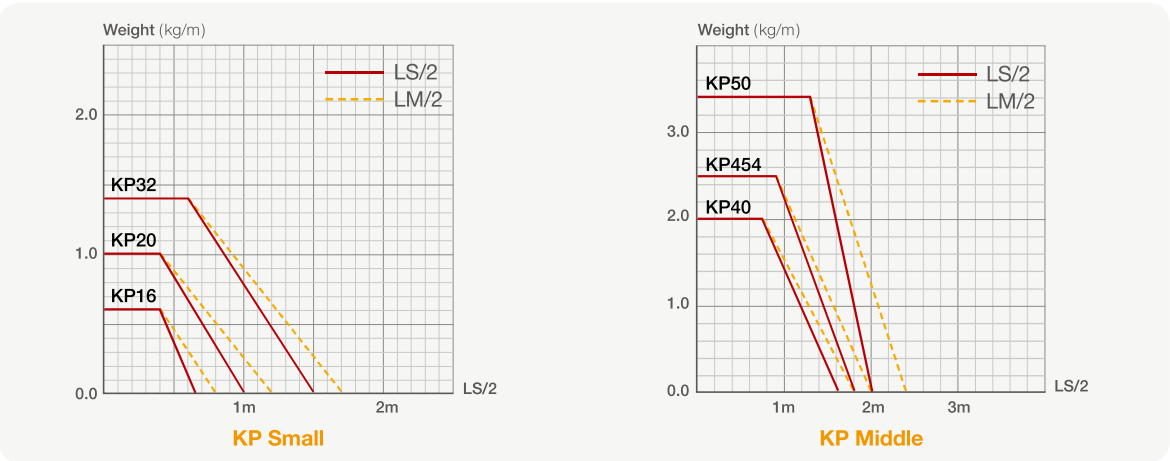
■ FreeSpan ■

케이블 캐리어의 Self-Load에 의한 처짐이 없는 길이를 FreeSpan 이라 하고, 케이블 하중에 따라 지지 하중의 길이가 달라진다. 케이블 캐리어는 처짐이 있으나 허용 가능한 길이(LM/2)와 처짐이 없이 허용가능한 길이(LS/2)가 있다.

The length of the carrier without sagging by Self-Load is called FreeSpan, and the self-supporting length is depends on the value of cable load. There are two kinds of length.



Load Diagrams Self-Supporting Length



Structure

Cover

Body

Moving Bracket

Fixed Bracket

- Material**
: Engineering Plastic with Glass Fiber+@(UL94 HD)
- Speed**
: 3m/sec
- Acceleration**
: 10m/s²
- Temperature**
: -25~125℃
- Applications**
: 공작기계, 자동화기계, 의료기계, 겐트리로봇, 일반산업기계 적용
Machine tools, Automations machines, Medical equipment, Gantry robot equipment

End Bracket Setting Example

• Short Distance Type 1 : MU/FD(UD)

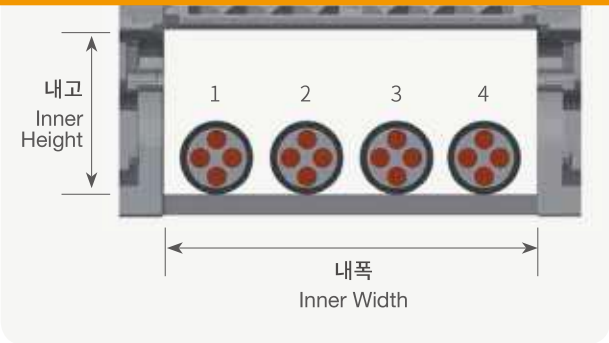
• Short Distance Type 2 : MU/FU(UU)

• Short Distance Type 3 : MD/FD(DD)

• Short Distance Type 4 : MD/FU(DU)

케이블 캐리어 사양 선정

① **케이블 캐리어 내고 설정**
Cable Carrier Inner Height Setting
전선, 혹은 호스의 가장 큰 외경을 기준으로 하며 약 20% UP하여 사양에 맞는 내고를 선정한다.
Based on the largest external diameter of a cable or hose, approximately 20% up to select the inner height that meets the specifications.



② **케이블 캐리어 내폭 설정**
Cable Carrier Inner Width Setting
전선, 혹은 호스의 외경(1+2+3+4)에 약 25% UP하여 사양에 맞는 내폭을 선정한다.
Select inner width according to the specification by increasing about 25% of cable and hose's outer diameter(1+2+3+4).

③ **케이블 캐리어 곡률반경 설정**
Cable Carrier Radius Setting
전선, 혹은 호스의 곡률반경에 맞게 선정한다.
케이블 캐리어의 곡률반경이 전선, 혹은 호스의 곡률반경 사양 대비 큰 설정은 문제가 없지만 작은 설정은 쓸림에 의한 마모나 전선 혹은 호스에 대한 케이블 캐리어의 반작용이 발생할 수 있다.
Select for the radius of a cable or hose.
If the cable carrier radius is bigger than cable or hose, it is not a problem. But if it is smaller setting, it may cause wear due to wiping or the reaction of the cable carrier to the cable or hose.

전선 :
Electronic Cables
케이블 외경에 6~8배
R min > 6~8 x Φ

에어호스 :
Pneumatic Hoses
에어호스 외경에 8~10배
R min > 8~10 x Φ

유압호스 :
Hydraulic Hoses
유압호스 외경에 12~15배
R min > 12~15 x Φ

④ **케이블 캐리어 길이 설정**
Cable Carrier Length Setting (calculation)
장비의 행정거리 1/2 여유길이 N (Safety Length + πr) 값을 더하면 케이블 캐리어 전체 길이가 된다.
("N"값 : PAGE 10 및 각제품의 Specification 참조)
The cable carrier's total length is half of the equipment's total travel length and adding an extra length of N (Safety Length + πr) value. ("N": See PAGE10 and Specifications for each product)

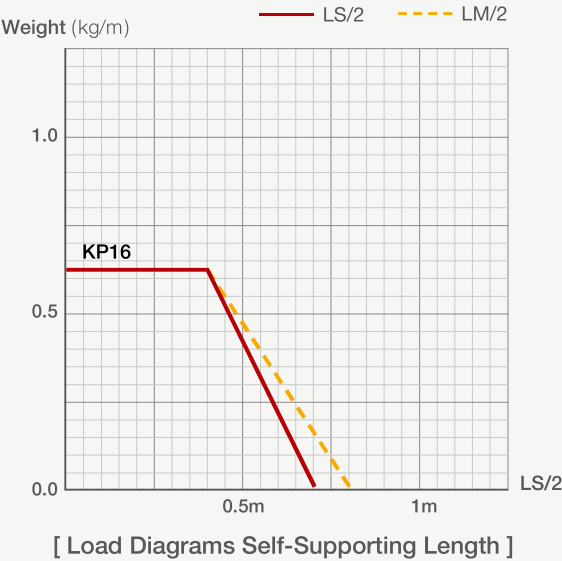
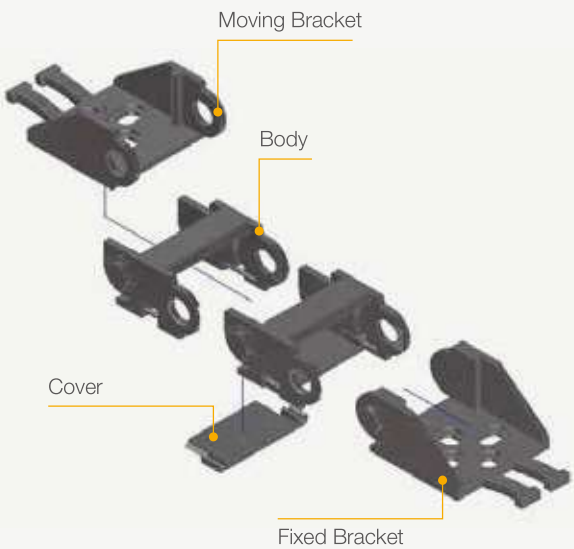
Order Form

					(mm)
EX)	KP16 - W010 - R018 - 1014L - SETUD				
	제품타입 Type	내폭 Width	곡률 Radius	길이 Length	브라켓 조립방향 End Bracket Setting

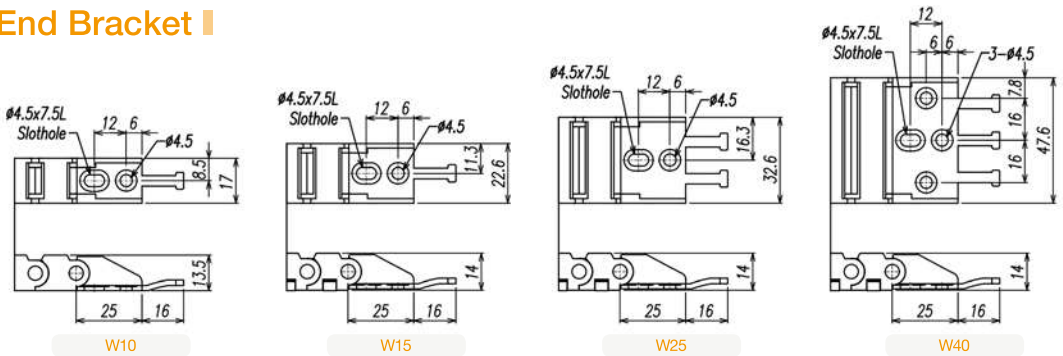
KP Carrier

KP16

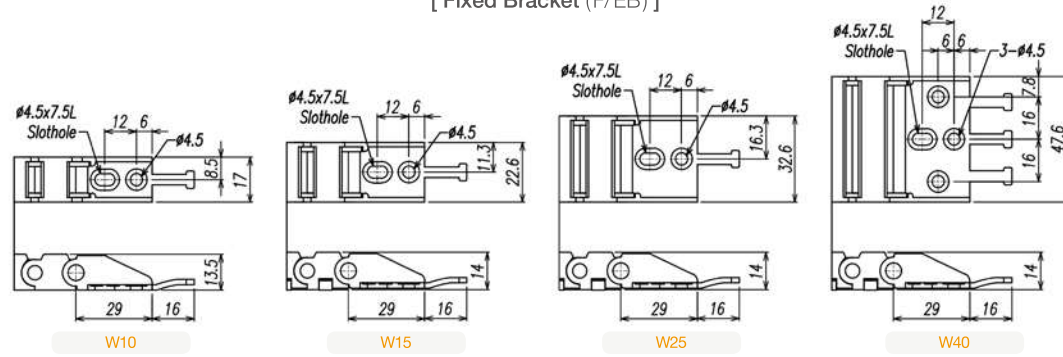
Structure



End Bracket

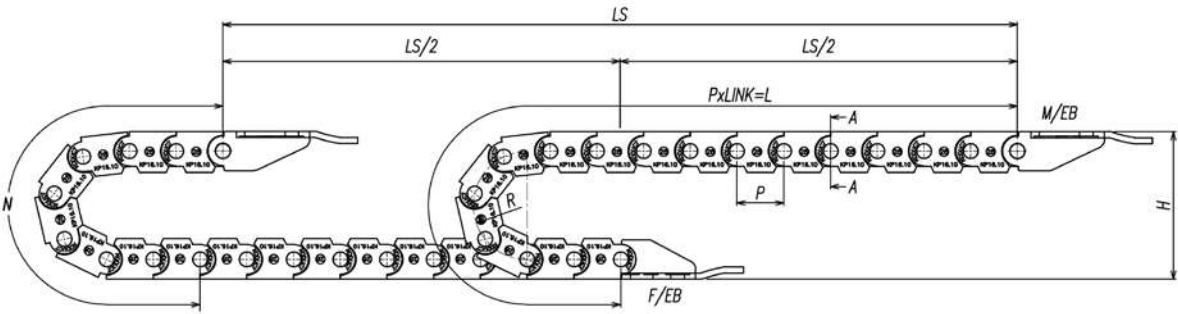


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

Carrier Link

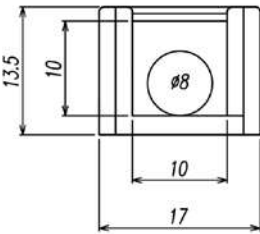


$$\left[L = \frac{LS}{2} + N \right]$$

- **LS** : Total Machine Travel
- **L** : Length
- **N** : Safety Length+rrr
- **P** : Pitch
- **R** : Radius
- **H** : Height
- **F/EB** : Fixed Bracket
- **M/EB** : Moving Bracket

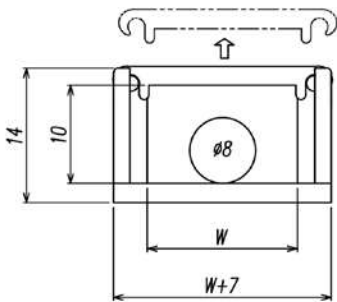
Section A-A

[Cover 일체형]
All-in-cover



W10

[Cover 오픈형]
Open cover



W15, W25, W40

Specification

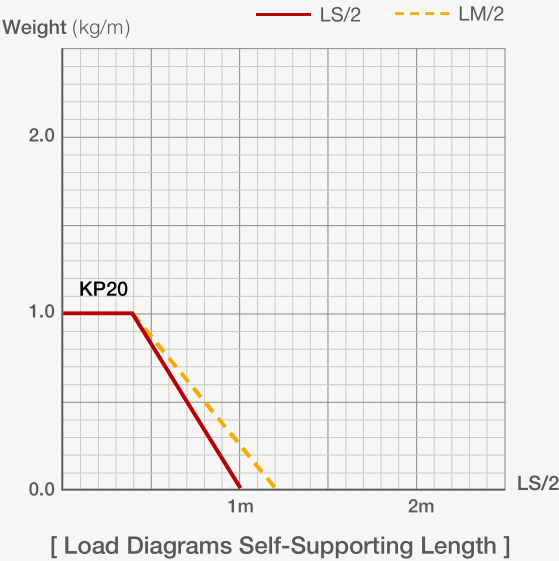
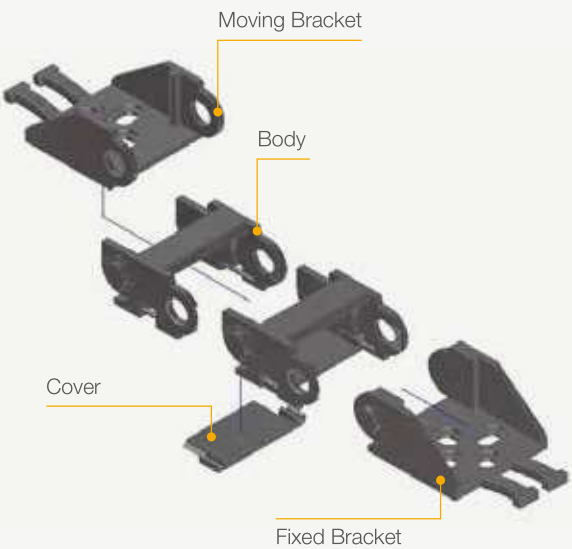
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP16		18 (0.708)		49 (1.929)	120.5 (4.744)		
	10 (0.393)	28 (1.102)		69 (2.716)	151.9 (5.980)	0.111	0.005
	Cover 일체형 All-in-cover	38 (1.496)		89 (3.503)	183.3 (7.216)		
		50 (1.968)		113 (4.448)	221 (8.700)		
	15 (0.590)	18 (0.708)	15.6 (0.614)	50 (1.969)	120.5 (4.744)	0.168	0.005
	25 (0.984)	28 (1.102)		70 (2.756)	151.9 (5.980)	0.209	0.007
		38 (1.496)		90 (3.543)	183.3 (7.216)	0.274	0.009
	40 (1.574)	50 (1.968)		114 (4.488)	221 (8.700)		

(1inch = 25.4mm)

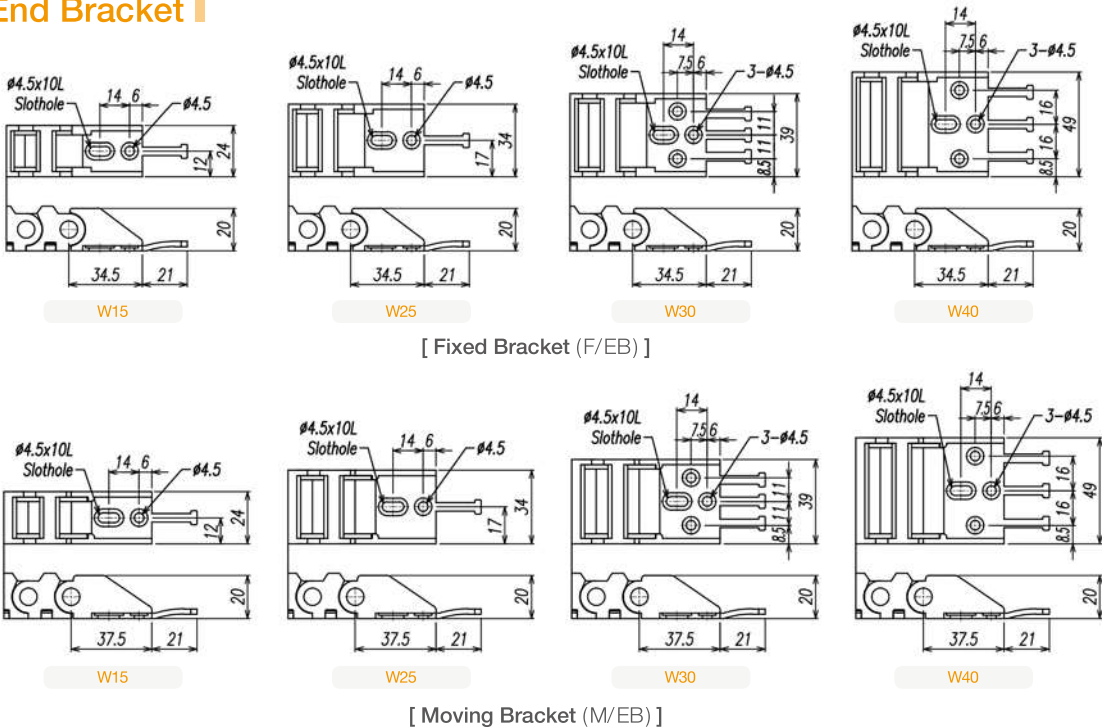
KP Carrier

KP20

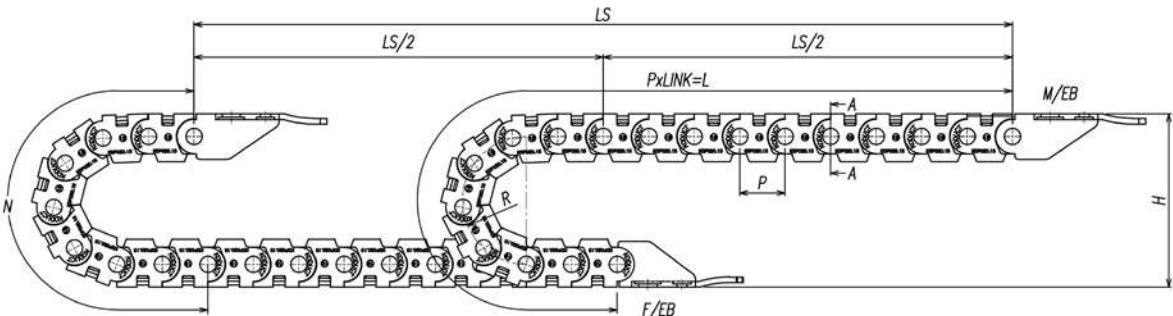
Structure



End Bracket



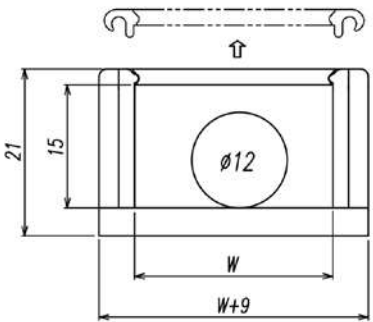
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

• **LS** : Total Machine Travel • **L** : Length • **N** : Safety Length+rr • **P** : Pitch
• **R** : Radius • **H** : Height • **F/EB** : Fixed Bracket • **M/EB** : Moving Bracket

Section A-A



Specification

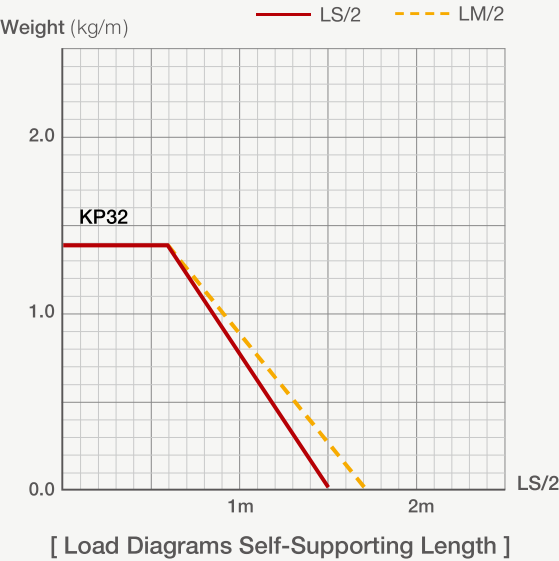
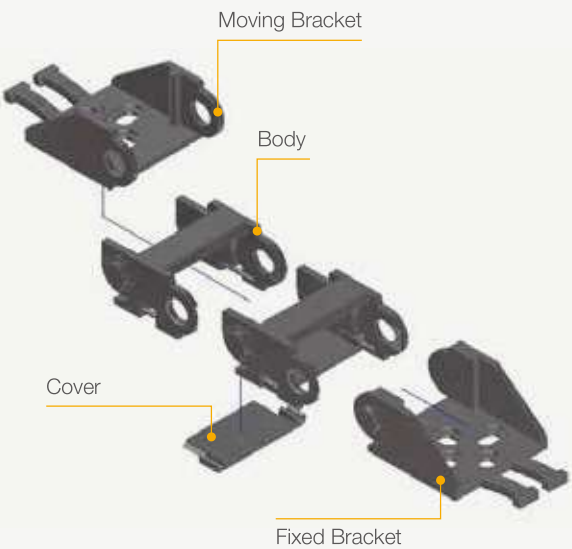
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP20	15 (0.590)	18 (0.708)	20 (0.787)	56 (2.204)	136 (5.354)	0.243	0.012
	25 (0.984)	28 (1.102)		76 (2.992)	168 (6.614)	0.284	0.013
	30 (1.181)	37 (1.456)		94 (3.700)	196 (7.716)	0.297	0.016
	40 (1.574)	50 (1.968)		120 (4.724)	237 (9.330)	0.347	0.018

(1inch = 25.4mm)

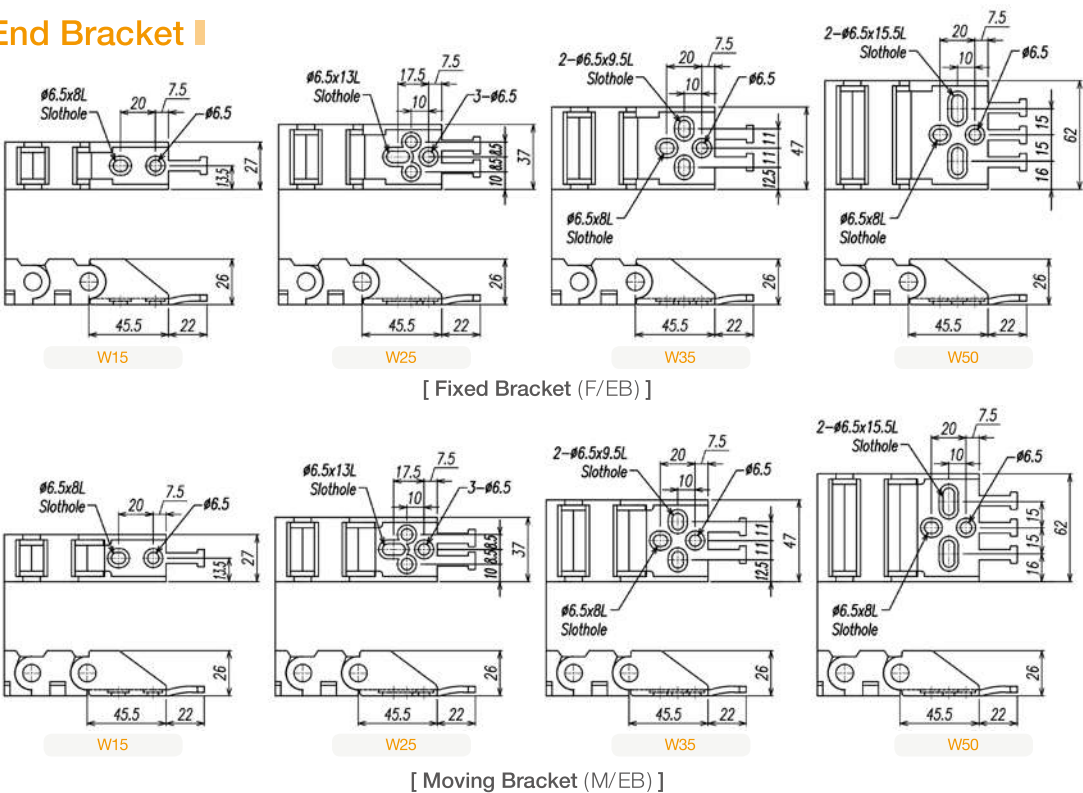
KP Carrier

KP32

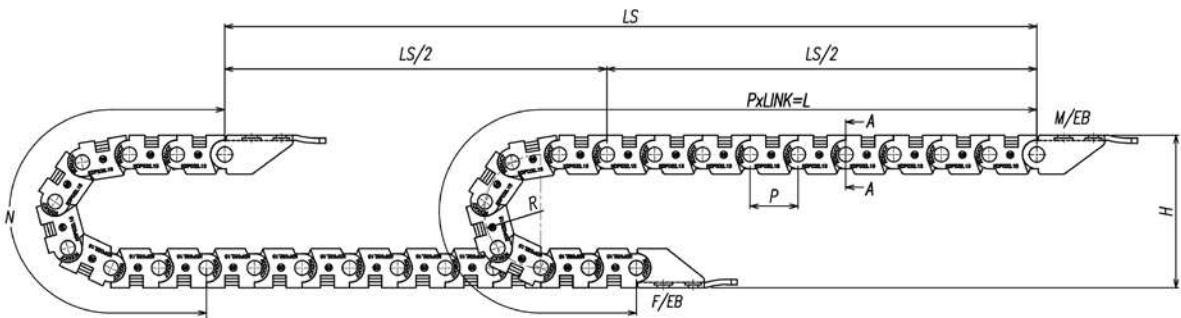
Structure



End Bracket



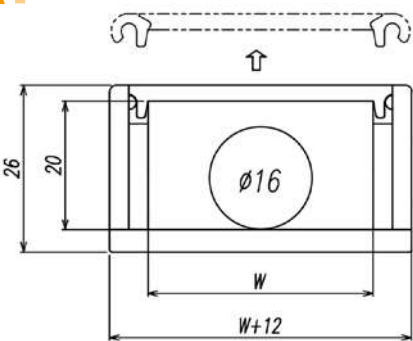
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

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Section A-A



Specification

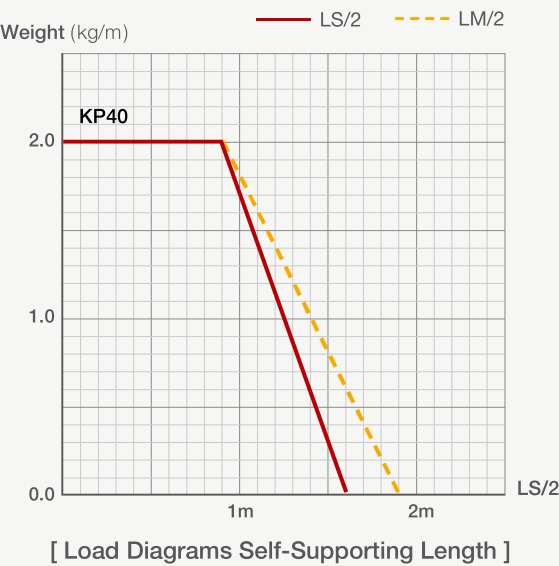
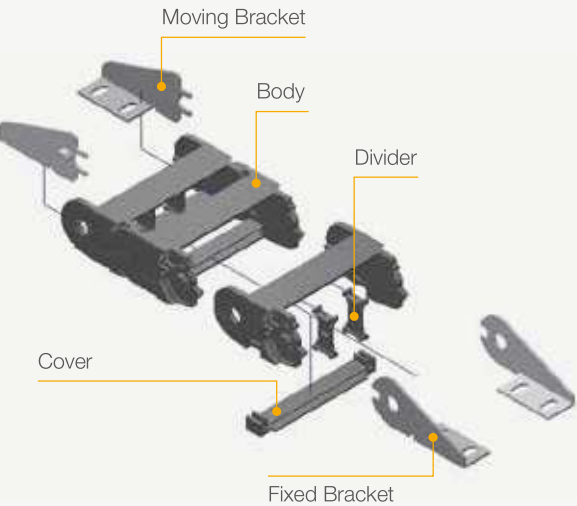
TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	1m (kg)	EB Set (kg)
KP32	15 (0.590)	28 (1.102)	32 (1.259)	82 (3.228)	215.9 (8.500)	0.351	0.026
	25 (0.984)	38 (1.496)		102 (4.015)	247.3 (9.736)	0.414	0.028
	35 (1.377)	50 (1.968)		126 (4.960)	285.0 (11.220)	0.457	0.032
	50 (1.968)	75 (2.952)		176 (6.929)	363.5 (14.311)	0.520	0.038
		100 (3.937)		226 (8.897)	442.0 (17.401)		

(1inch = 25.4mm)

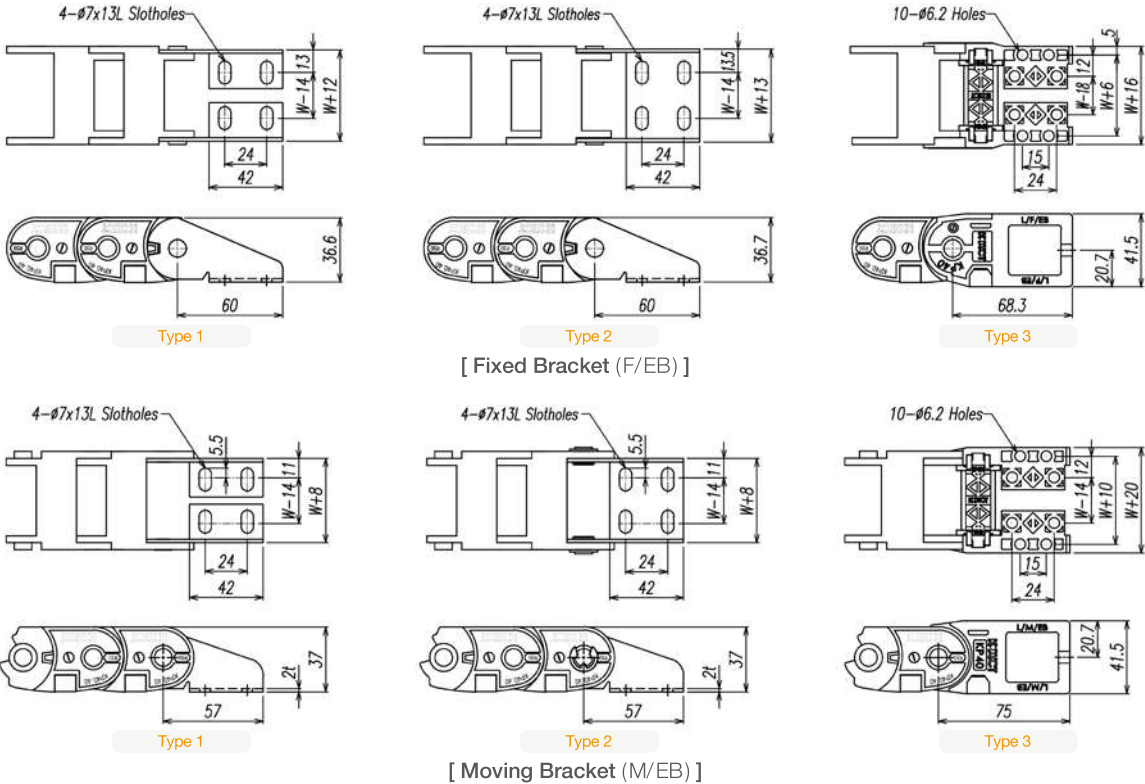
KP Carrier

KP40

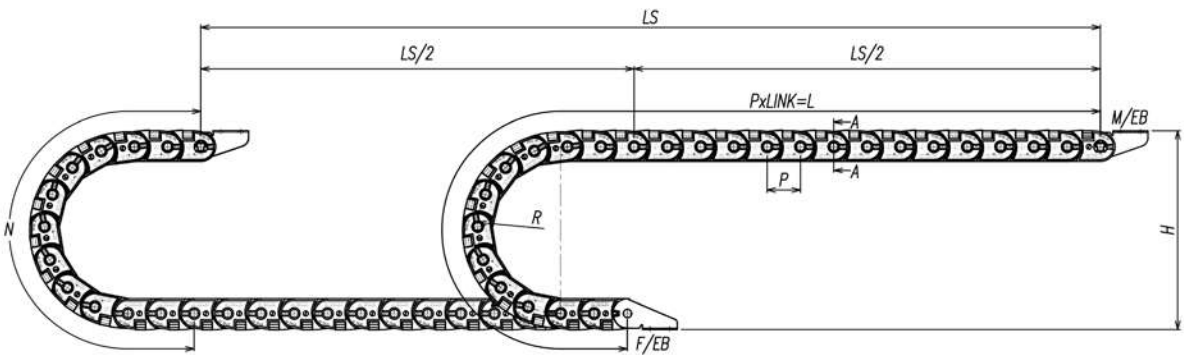
Structure



End Bracket



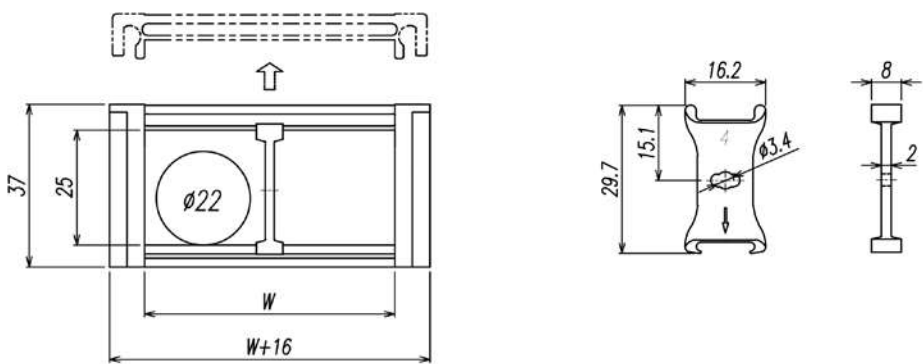
Carrier Link



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- N : Safety Length+rr
- P : Pitch
- R : Radius
- H : Height
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Section A-A



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KP40	40 (1.575)	50 (1.969)	40 (1.575)	139 (5.472)	317 (12.4800)	0	0.735	0.155 (Type1)
		75 (2.953)		189 (7.441)	396 (15.591)			
	57 (2.244)	100 (3.937)		239 (9.409)	474 (18.661)	0	0.795	0.170 (Type2)
	80 (3.150)	125 (4.921)		289 (11.376)	553 (21.772)	1	0.930	0.190 (Type2)
		150 (5.906)		339 (13.346)	631 (24.842)			
	100 (3.937)	200 (7.874)		439 (17.283)	788 (31.024)	1	0.985	0.098 (Type3)

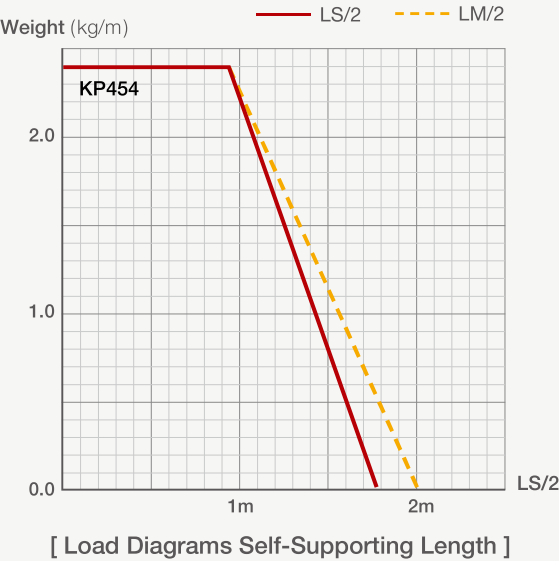
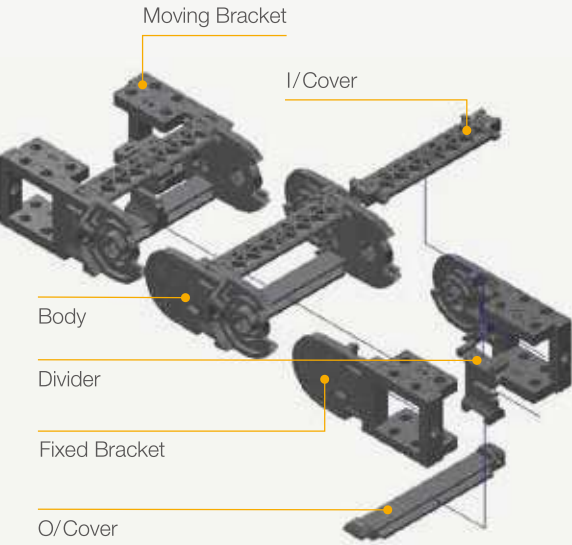
※ Type2 : W40, W57만 가능 (only for W40, W57)

(1inch = 25.4mm)

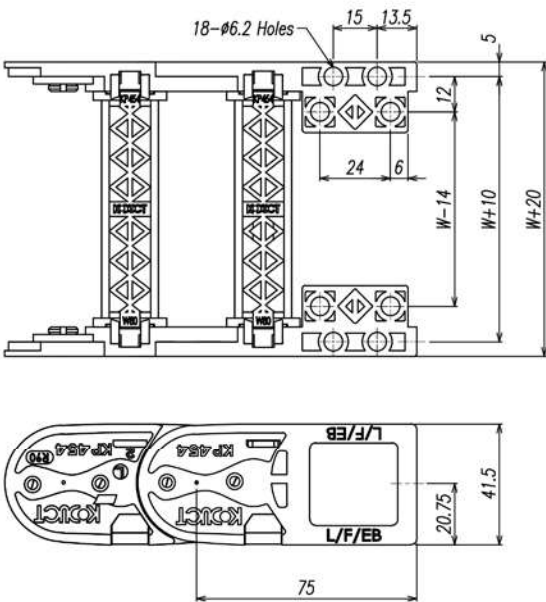
KP Carrier

KP454

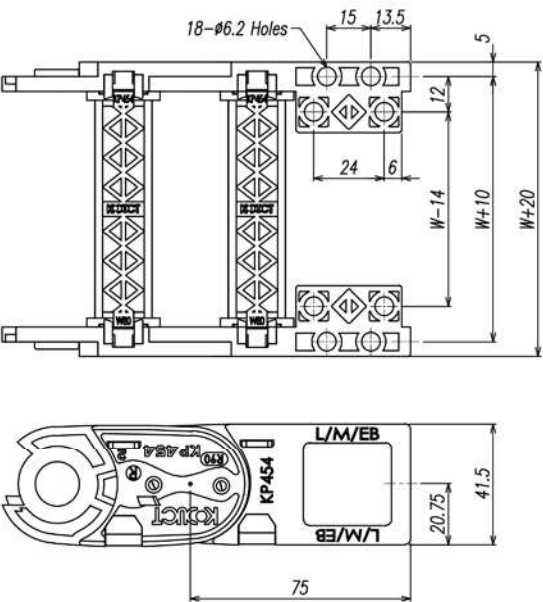
Structure



End Bracket

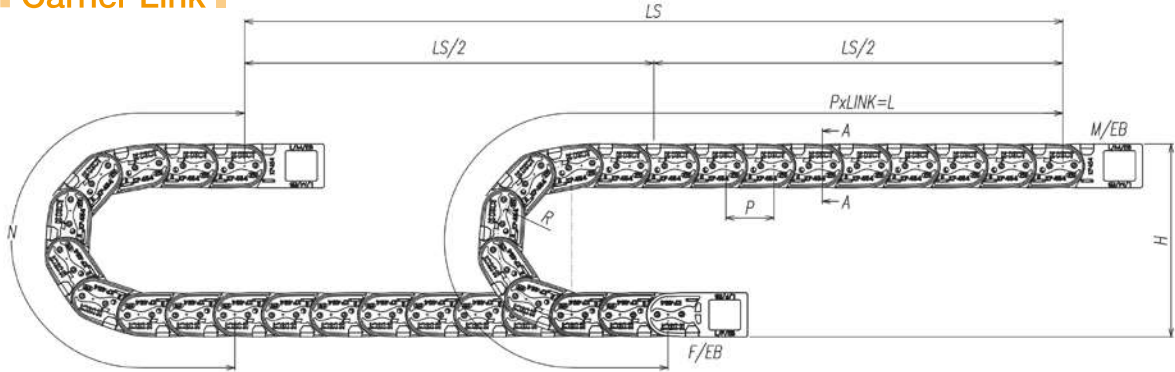


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

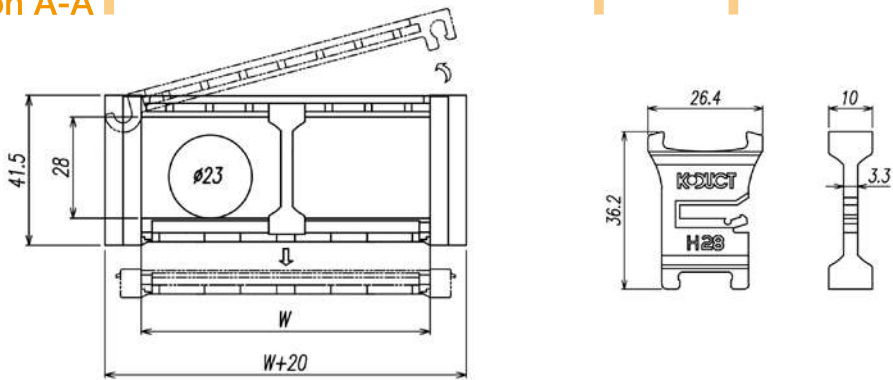
Carrier Link



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Section A-A



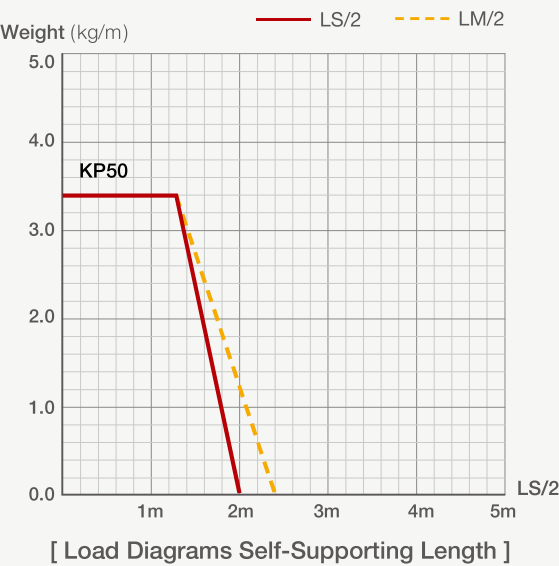
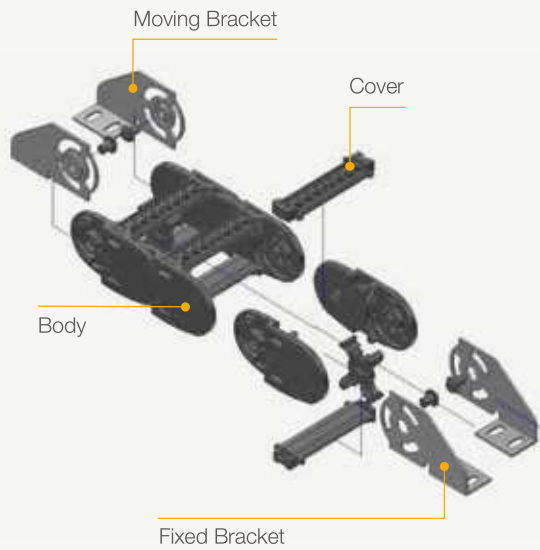
Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KP454	40 (1.575)	48 (1.889)	45.4 (1.787)	137.5 (5.413)	332 (13.070)	0	0.893	0.114
		70 (2.755)		181.5 (7.145)	401 (15.787)			
	57 (2.244)	90 (3.453)		221.5 (8.720)	464 (18.267)	0	0.955	0.116
	80 (3.150)	120 (4.724)		281.5 (11.082)	558 (21.698)	1	1.071	0.121
		145 (5.708)		331.5 (13.251)	637 (21.141)			
	100 (3.937)	195 (7.677)		431.5 (16.988)	794 (31.259)	1	1.142	0.124

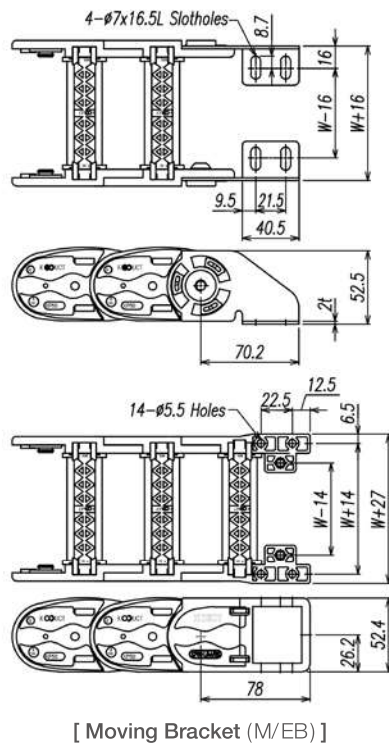
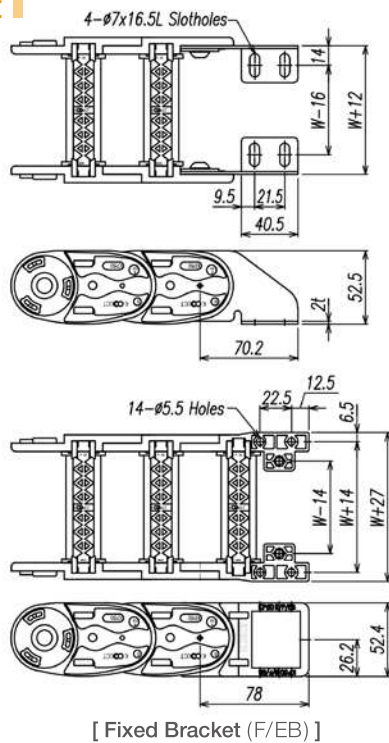
KP Carrier

KP50

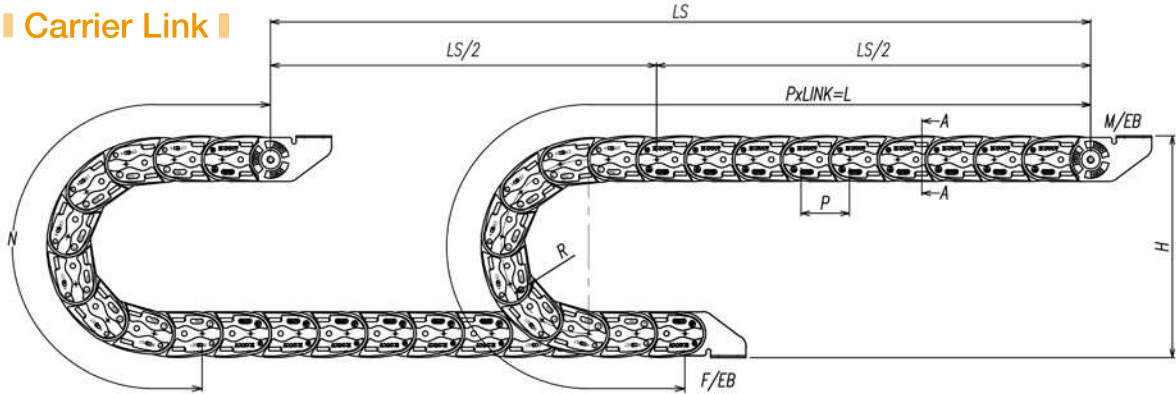
Structure



End Bracket



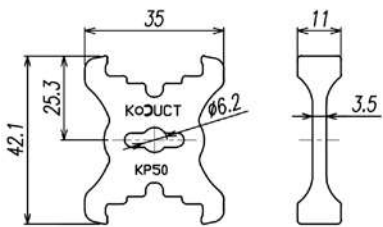
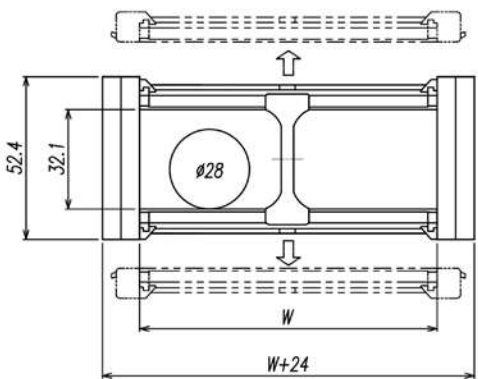
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

- **LS** : Total Machine Travel
- **L** : Length
- **N** : Safety Length+rr
- **P** : Pitch
- **R** : Radius
- **H** : Height
- **F/EB** : Fixed Bracket
- **M/EB** : Moving Bracket

Section A-A



Separator : Ø6 (Aluminum)

Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	DVDR (ea)	1m (kg)	EB Set (kg)
KP50	40 (1.575)	60 (2.362)	55.5 (2.185)	175 (6.889)	410.4 (16.157)	0	1.456	0.254 (Type 1)
	50 (1.969)					0	1.571	
	65 (2.559)	75 (2.952)		205 (8.070)	457.5 (18.012)	0	1.747	
	*75 (2.952)					0	1.863	
	80 (3.149)	100 (3.937)		255 (10.039)	536 (21.102)	1	1.921	
	*87 (3.425)					1	1.935	
	100 (3.937)	125 (4.921)		305 (12.007)	614.5 (24.193)	1	2.151	
	120 (4.724)					2	2.389	
	*150 (5.905)					2	2.734	
	160 (6.299)	150 (5.905)		355 (13.976)	693 (27.283)	2	2.853	
	*175 (6.889)					2	3.026	
	*187 (7.362)	200 (7.874)		455 (17.913)	850 (33.465)	2	3.166	
	200 (7.874)					2	3.317	

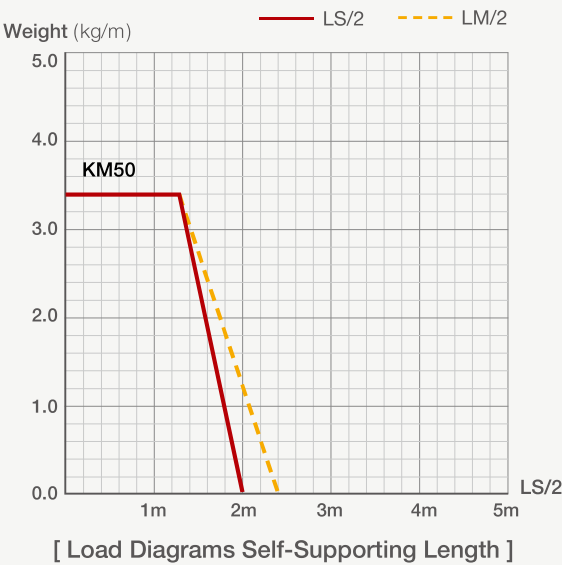
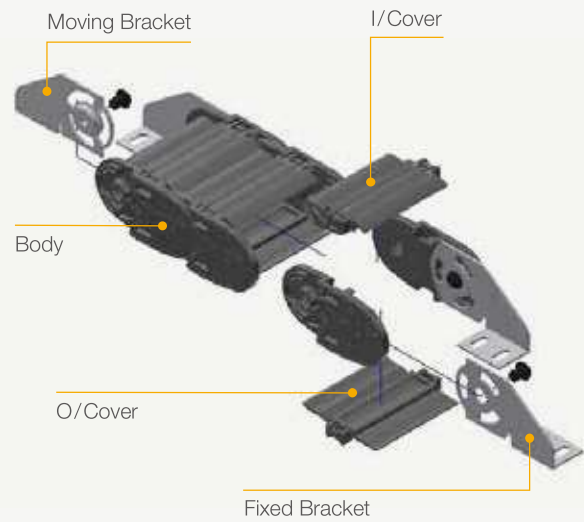
* 주문 제작 가능 / Can make to order

(1inch = 25.4mm)

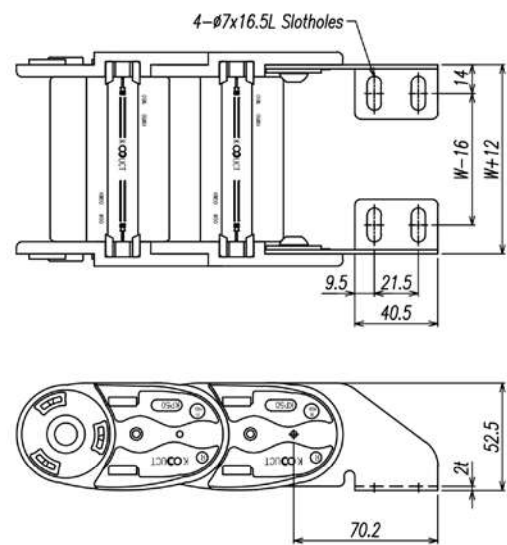
KP Carrier

KM50

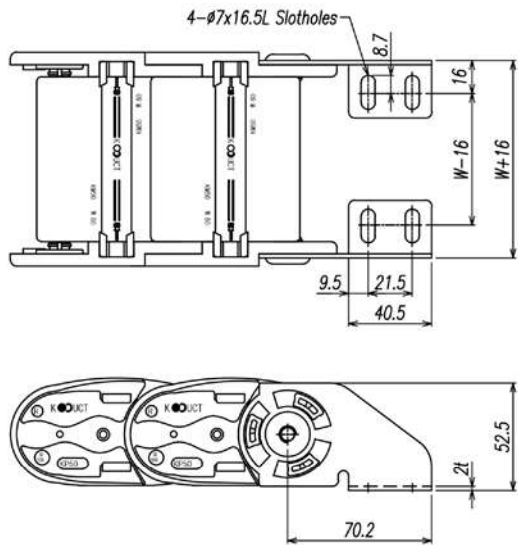
Structure



End Bracket

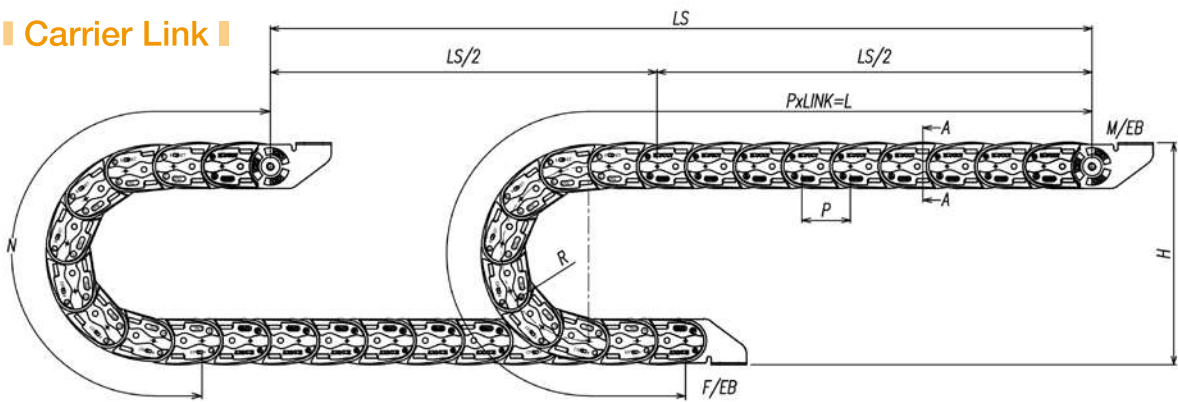


[Fixed Bracket (F/EB)]



[Moving Bracket (M/EB)]

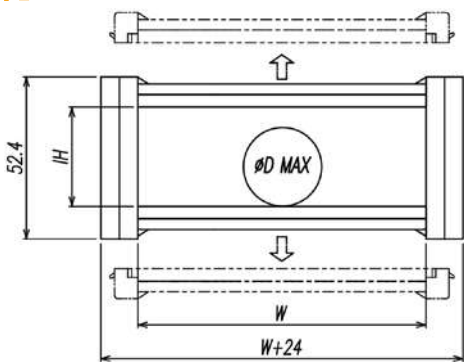
Carrier Link



$$\left[L = \frac{LS}{2} + N \right]$$

- **LS** : Total Machine Travel
- **L** : Length
- **N** : Safety Length+rrr
- **P** : Pitch
- **R** : Radius
- **H** : Height
- **F/EB** : Fixed Bracket
- **M/EB** : Moving Bracket

Section A-A



Specification

TYPE	W mm (inch)	Radius mm (inch)	Pitch mm (inch)	Height mm (inch)	N mm (inch)	IH mm (inch)	ØD max	1m (kg)	EB Set (kg)
KM50	40 (1.574)	75 (2.952)		205 (8.070)	457.5 (18.012)	24 (0.945)	Ø12	2.862	
		100 (3.937)		255 (10.039)	536 (21.102)	28 (1.102)	Ø16		
	65 (2.559)	125 (4.921)	55.5 (2.185)	305 (12.007)	614.5 (24.193)	29 (1.142)	Ø20	3.323	0.254
		150 (5.906)		355 (13.976)	693 (27.283)	30 (1.181)	Ø25		
	80 (3.149)	200 (7.874)		455 (17.913)	850 (33.465)	32 (1.260)	Ø28	3.550	